Universal Design of Field-based Teaching

A Practical Handbook

Marie A. van der Kloet and Ellen Lien, University of Bergen

Introduction

This guidebook is for teachers who design and lead field-based teaching and study advisors who contribute to this work. This guidebook includes strategies, discussion questions and recommendations for strengthening accessibility by applying Universal Design for Learning (UDL) principles to field-based teaching. It focuses on practices and approaches relevant to all students. It is not intended as a resource for how to provide individual adaptations for students with disabilities. The purpose of Universal Design for Learning is to improve accessibility for all students and to implement practices that reduce barriers (which may, in turn, reduce the need for some types of individual adaptations). We advocate for the use of UDL principles in field-based teaching and provision of resources and expertise about individual adaptations which may be necessary for some students.

> ***«Every fifth student has a disability that limits their studies»***
> ***Statistics Norway***

In Norway the amount of students with impairments is 31% (of all students), while the number of students that have a disability that limits their studies is 21%, according to the Eurostudent 2024 survey (Statistisk sentralbyrå, 2024).

This guidebook supports teachers, who along with support from their colleagues, department and institution, take on the responsibility for accessible teaching. This guidebook is focused on practices that individual teachers and groups of teachers can engage in to strengthen accessibility. It is not intended to address larger, institutional level work needed to improve accessibility in teaching.

The structure of this guide is that every chapter starts with our Top Recommendations and Typical Barriers, followed by more detailed recommendations, practices and questions.

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You can read more about the project at the end of the guidebook.

Marie A. van der Kloet
Ellen Lien

Guide to Universal Design of Field-based Teaching

The Big Picture: 11 Recommendations to start with

1. **Expect** to encounter students with disabilities during field-based teaching
2. **Identify barriers** in your field-based teaching. Differentiate between barriers that can be removed or addressed from barriers that are essential and inflexible (e.g., sjømannsattest, passport/visas, financial costs).
3. **Practical details:** It is very important to provide clear information about all practical details (accommodation, travel and work times, place, equipment and transportation), as these are aspects of field-based teaching that students think about and discuss extensively among themselves.
4. **Learning outcomes, roles and expectations:** Be aware of the importance of clear learning outcomes, roles and the expectations associated with the field-based teaching.
5. **Plan social time:** With students, think intentionally about how social or leisure time can be used to support learning. What activities can strengthen group collaborations, motivate students and facilitate recover/rest after challenging field-based learning? Consider how those who need time alone can be connected with the group.
6. **Daily communication**: Plan for morning briefings (including details about learning activities and site conditions (e.g., physical activity demands, toilet access, weather) and afternoon/evening debriefing (to discuss learning activities, resolve concerns, and plan the next day).
7. **Alternative plans:** Identify what will students do if they are unable to fully participate in activities and what alternatives may be less demanding (physically demanding, or time consuming).
8. **Make students aware of possible conflict situations** by letting them make a list of possible situations in which conflicts can arise and also making suggestions on how to solve them prior to departing for field activities.
9. **Develop common rules together with the students**: Develop and establish norms for collaboration, respect and conflict resolution together with the students. Use the students' list of possible situations in which conflict may arise, and their own proposed solutions, as a basis for doing so.
10. **Develop a comprehensive accessibility checklist** to support planning and leading field-based teaching. Identify who is responsible for each task and the associated deadlines.
11. **Create a timeline** that includes all major dates and related actions/responsibilities (preceding, during and after the field-teaching activities). Share with students and integrate the timeline in their preparation for, engagement during and related assessments.

Planning

This section focuses on planning for field-based teaching, including practicalities such as transport, food and accommodation as well as pedagogical preparation. Teachers' planning has significant effects on how accessible field-based teaching can be. Below are key recommendations to strengthen accessibility in field-based teaching, common barriers that occur in relation to planning and questions to discuss with colleagues. More detailed information and recommendations can be read in the extended Planning section.

Top recommendations

1. **Ensure physiological and psychological needs are met** so that the students can focus on learning
2. **Include colleagues,** in particular study advisors, early in the planning process. Study advisors often know more about certain students' needs and may have valuable insights and recommendations.
3. **Collect and share detailed information** about everyday activities (sleeping, toileting, eating, showering, privacy)
4. **Identify and communicate barriers** that are essential and inflexible (e.g., sjømannsattest, passport/visas, financial costs)
5. **Expect that students with disabilities will be on your course** and anticipate common experiences of disability among students (e.g., chronic illness, neurodivergence, mental health concerns)
6. **Establish communication plans** to ensure clear, timely and coordinated information sharing
7. **Design opportunities for feedback and repetition**
8. **Communicate if and how assessment will happen**
9. **Budget for accessibility** (e.g., to develop virtual field guides, cover possible additional costs related to specific food or equipment needs to support greater inclusion)
10. **Discuss with peers how you will manage an emergency** while in the field. Consider accidents (car accidents, injuries), mental/physical health issues (panic attacks, allergic reactions) and interpersonal issues (fighting, harassment/assault).
11. **Develop a comprehensive checklist** to support completion of all planning work. Identify who is responsible for each task and the associated deadlines.
12. **Create a timeline** that includes all major dates and related actions/responsibilities (preceding, during and after the field-teaching activities). Share with students and integrate the timeline in their preparation for, engagement during and related assessments.

Typical barriers

- **Planned field teaching is based on the idea of a 'normal student'** (cisgendered, non-disabled, straight, neurotypical, Norwegian, middle class, high level of physical fitness, etc.).
- **Poor information about everyday needs** (e.g., transport, food, accommodation).
- **Unclear learning outcomes and assessment methods.**
- Pace/scale of learning activities **do not allow for adequate rest or enough time to give and use feedback.**
- **Prohibitive costs** (for clothing, shoes, travel or other daily needs).

Planning: read more

Both teachers and students value the possibility to see how disciplinary concepts and practices work outside the classroom. Learning in the field (which could be a museum, an artist's studio, an archaeological site, a hillside, a seafloor) creates time and space for students to learn in ways that can be powerful and inclusive. Teachers are often excited to work with students outside the classroom; this includes the unanticipated experiences. But excitement for some unexpected learning does not mean that people like surprises. In fact, uncertainty that contributes to feeling unsafe and insecure detracts from learning.

Universal Design for Learning in Field-based Teaching

Being able to clearly plan for and communicate what matters (in terms of learning) for field-based teaching is both a key premise of Universal Design for Learning (UDL) *and* a strength in our teaching community. There are several ways we can strengthen learning through preparation.

Scaffolding learning: use of preparation activities

Planning for field-based teaching can be strengthened by developing small-scale activities where students can have a 'test-run' before longer and more complex experiences. For example, multiple staff at UiB already include field work activities lasting half a day or 1 to 2 hours close to the university before the main field activities.

These small activities gave staff a chance to ensure students had appropriate clothing and could practice certain skills. These short activities also helped to ensure better communication with students. Use of preparatory activities may be especially helpful for first year bachelor students.

Feedback and repetition

It is important to include and plan for failure/struggle, opportunity for feedback, and time to repeat a skill or practice. Several staff noted that having multiple opportunities to become competent at skills was essential, and that this was particularly important given that students can become ill while in the field.

Planning for repetition and time to give and use feedback during field-based teaching is essential when students are assessed on their field work.

Field work in different environments – in the terrain, at a museum or in ruins. Photo: Ellen Lien, UiB

Students work in groups ahead of the trip
Photo: Håvard Kroken Holme, UiB

Focus on essential activities (avoiding side quests)

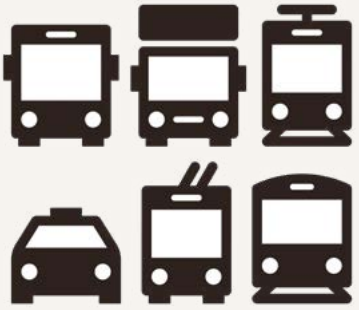
Occasionally, additional activities get added to field-based teaching because they might be perceived as fun or desirable (e.g., longer hikes, extra stops/sites). Students have trouble navigating if these activities are optional and may already have exceeded their mental and/or physical limits. Moreover, additional activities can leave teaching staff with little energy for tackling arising needs (e.g., conflicts in the student groups, illness, changing weather/site conditions).

Everyday need

Learning is a resource-demanding process which can only happen if your basic needs are met and you feel safe. When planning for how to meet students' basic needs for safety, we are asked to think about their physiological needs (e.g., sleep, food) and psycho-social needs (e.g., sense of belonging to a group). When these needs are met, students have a higher capacity to spend their energy on learning.

> ***«There are people who come here that have never hiked or don't even have good hiking boots or have hiked in completely different landscapes... there's an assumption that everyone loves hiking. I love hiking. So I'm sort of part of that as well.»***
> ***Staff member***

Taking care of daily physiological needs is essential. If students are exhausted, hungry, afraid or inadequately protected from weather, they are unprepared to learn. In many fields, there is a consistent cultural norm to valorise or celebrate some amount of suffering as a part of field work (walking far, carrying heavy equipment, poor or limited food, long working hours). To strengthen inclusion, we must address the idea that suffering is essential to field-based teaching and work to create better conditions for learning. Of course, we cannot guarantee great weather or afford luxury accommodation, but we can plan for good learning conditions.



Different means of transport
Photo: Colourbox

Transportation

Our 'fields' can require transportation including travel by city bus, plane or boat. Transportation might be provided to students or they may organise travel themselves. Planning for more inclusive transportation includes consideration of:

- **Costs** (Do students pay? How much? When? Are grants or reimbursement possible?)
- **Motion sickness** (What options exist for managing motion sickness? What happens if students are too unwell to participate?)
- **Inaccessible transport** (Is the mode of transportation suitable for students with disabilities? Are there safety concerns for students who may be shorter/lighter or taller/heavier than expected?)
- **Alternative transport** (Is this permitted?

Can students arrange their own transportation?)
- **Timing** (Is travel early/late in the day? Are there transfers that are very short where students could miss their connection?)
- **Walking** (Are there significant distances that students must cover on foot? Is the terrain or environment challenging or unsafe?)

How transportation is planned can pose barriers. Students may take medications or have caring responsibilities at home that make early morning or late-night travel especially challenging. High costs and delayed reimbursements can be prohibitive for students who have limited financial resources. Additionally, many students worry about missing connections or having to navigate transportation alone. Anticipating barriers, being aware of alternatives, and providing detailed information can help to mitigate barriers related to transportation.

Accommodation

In the project interviews, students emphasised that accommodation is a key accessibility concern. They have described receiving poor or little information and being asked to stay in accommodation where they felt very unsafe or uncomfortable (for example, being expected to share a double bed with a stranger). Field-based teaching, when it includes overnight stays, entails planning for accommodation, and teachers often find this task challenging. It can feel that you are unable to meet everyone's needs and it is impossible to accomplish this. Our task is not to ensure that everyone likes the accommodation, but to ensure that people feel safe and are able to rest/sleep during overnight stays. Often, students make their own arrangements for where to stay; teachers then share information to support students' planning.

Safety

Many students may have specific needs related to safety. Students may have experienced abuse/violence in their homes from friends, partners or family members or have experienced trauma related to war/conflict or other forms of violence. They may have illnesses or disabilities that may unwillingly be disclosed if they share spaces with others. When investigating and communicating about accommodation, we can investigate:

- Does the accommodation have locking doors/windows? Can others access sleeping areas while students are asleep?
- Are sleeping arrangements individual or shared?
    - How will shared rooms be organised? According to gender? (If yes, how will trans or non-binary people be included?)
    - When can students communicate needs related to safety?
- Does the accommodation have appropriate safety-related accessibility features (e.g., light and sound fire alarms)? Is there a staff member from the accommodation available 24hr?
- What guidelines can be established about use of phones in sleeping spaces?

Rest/sleep

Teachers often emphasise how exhausted they are at the end of teaching days (and observe the same in students). Both mentally and physically, people are often at their limit and rest is crucial for effective teaching and learning. Preparing for good (enough) sleep can require sharing strategies, setting expectations and clear communication

Examples of accommodations
Photoes: Østerbø fjellstove, Aurlandsdalen and Magnusgarden, Lyngheisenteret

- Identify good strategies for shared sleeping spaces (quiet hours, earplugs, clear information about use of lights or devices)
- Determine if there are students who are certain to struggle with sleep (due to medication use, mental health concerns, small injuries (e.g., a broken wrist) or may have sleep practices that can disturb others (e.g., use of CPAP machine) to help with organising shared sleeping arrangements.
    - One method of organising room sharing could be around sleep needs (a quiet room, a 'night owl' room, etc.)
- Setting clear guidelines that prioritise sleep. Time set aside for sleep should not be compromised to prioritise additional learning activities or social time.
- Clear quiet/sleep periods – identify when the day starts (earliest rising and contact time with teachers) and when does it end (last chance for contact with teachers, quiet hours)
    - Additionally, clearly setting out when the workday starts and ends will allow people to moderate and regulate their energy. It is important that students have some time to rest in addition to when they will sleep. This gives students time to plan for the next day (studying, reading), take part in social activities, and take care of health needs.

Collecting information

Finding or collecting pictures of the accommodation and information about sleeping arrangements (single/double beds, hammocks, shared/individual rooms, room configurations) can alleviate students' anxiety and worries.

If students will be assigned to sleeping arrangements (a set hammock, bed, or room), determine how and share this process with students. This process can be integrated with collecting information about students' sleep needs.

Toileting, menstruation

For many cultures, speaking openly about toileting is taboo. However, we must communicate information about when and what kind of toileting options exist. Students with chronic illness (e.g., Crohn's/colitis), students who may use certain medical equipment (e.g., colostomy bag) and students who are menstruating may have specific needs. Students may be reluctant to ask, thus proactive communication about access to toilets is key. When planning we can consider:

- Identify and document where toilets are available (Which stops? When?) Include information about type of toilets (flush, compost toilets), and if there is a cost to use toilets.
- Communicating the safety risks to students about limiting food and water intake to avoid needing a toilet – this is a common strategy.
- If you teach in an area where toilets are unavailable, provide information and recommendations about how to urinate/ defecate outside. Many students will never have done this before!
    - Students using shewees (or similar) will need time to practice (perhaps in the shower) in advance.
    - If there are safety concerns in the field (e.g., dangerous animals, poisonous plants), establish a clear safety plan.
- Share information for students who are menstruating including when toilets with handwashing will be available and include

extra/emergency menstrual products and anti-bacterial hand gel in your field/first aid kit).
- Make plans for how trans and non-binary students can access toilets (which are primarily organised into men's and women's spaces) and who is a suitable partner for outdoor toileting. Do not assume all students are cisgender.
- Check out resources on toileting and field teaching for more strategies and suggestions (e.g. Greene et al, 2020)

Discussing toileting and menstruation can feel uncomfortable. But speaking openly and providing sufficient detail can help to remove barriers to access and allow students to plan and anticipate how they will manage their needs.

Food and dietary needs

Planning for full day or multi-day trips will include consideration of dietary needs. For some day trips, students may be responsible for bringing their own food. In these situations, planning can be focused on:

- what kinds and how much food to bring (e.g., high energy food, warm drinks).
- information about foods to leave behind (e.g., due to serious food allergies).
- information about if food can be purchased.

If food is provided to students, it is valuable to inquire into dietary needs. Some considerations may include:

- Is vegan or vegetarian food available?
- Are kosher or halal foods available?
- Can students access food outside of mealtimes (e.g., to take medicine, if a student is fasting during Ramadan)?
- Are common food allergens labelled?
- Can students have an extra plate of food if they are hungry?
- If a student has highly specific dietary needs – can they prepare their own food? (e.g., those recovering from eating disorders, complex allergies)

Finding out enough information about how food is organised, prepared and served ensures students know how their needs will be met. It can also help to determine if food will be a serious barrier. Students can also feel confident that there will be enough food, that there will be food they can eat and that they can afford food.

Food is, of course, more than sustenance. It is also about culture and community. Knowing this, we will also want to pay attention to when religious practices may impact field-based teaching (e.g., fasting during Ramadan) and engage in open dialogue with students about how to make field-based learning feasible.

Proper clothing and equipment

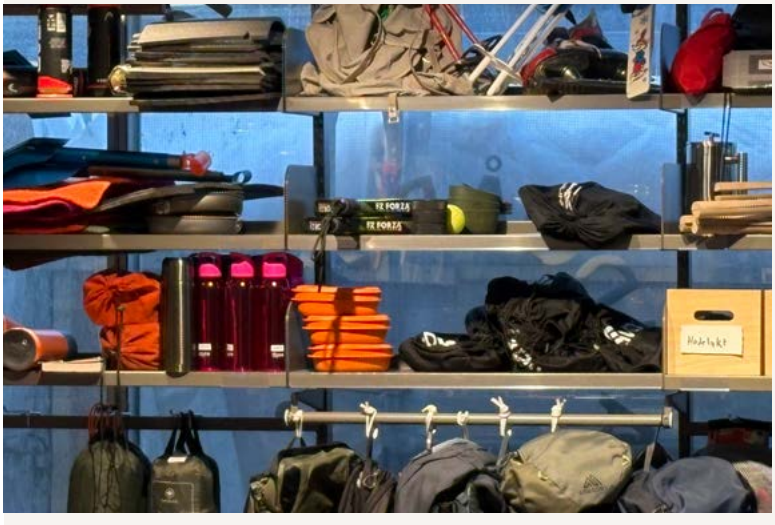
Proper clothing and equipment may be necessary for safety and comfort. If the student provides the clothing and equipment, a detailed and descriptive packing list can be used to indicate what is essential and what might be good 'extras' to have along. A detailed packing list can also explain key terms such as:

- What does waterproof mean?
    - E.g., waterproof footwear: Is this knee-high rubber boots or waterproof running shoes?
    - How to evaluate if a rain jacket is waterproof
- What are good shoes for walking?
    - Does this mean running shoes? What is the terrain that people will walk on and for how long?

Food
Photo: Colourbox

It may get wet...
Photo: Jonathan Soulè, UiB

Equipment to borrow from Skattkammeret/BUA
Photo: Ellen Lien, UiB



- What does modest apparel mean?
    - What parts of the body are expected to be covered, when and by whom?

Students who do not have all items may skip expensive items or items they do not believe are important. To help students find free or low-cost items, you can recommend where students:

- can borrow equipment (such as in Bergen: BUA, Tingoteket, and Skattekammeret),
- can buy it cheaper, for example from second-hand/pre-used stores, or through finn.no, or where there is a student/UiB discount.

Or you can encourage students who have multiples of necessary items (e.g., backpacks, rain jackets) to loan equipment to peers for short term use.

If the clothing and equipment is necessary for safety, an equipment check before departure is essential.

For clothing or equipment that UiB provides (e.g., boots, helmets, life vests, dry suits, gloves, protective eyewear), there should be a range of sizes that fit different bodies and genders properly. Regular inventory of sizes can help to ensure there is a good range of sizes, and enough in each size to match the current student group; this may be particularly relevant if equipment has been purchased based on a standard run of men's sizes, but women now comprise more of the student/staff group.

Emergency planning

All field-based teaching at UiB requires emergency planning. UiB has established both:

- Guidelines for Health, Safety, and Environment at Fieldwork, Research Cruises and Group Trips
- Collected Resources and Processes related to field-based teaching in the HSE portal

For teachers, it is important to take note of both how UiB sets out guidelines for teachers' safety and work and what expectations are held for students. Importantly, there is not currently a centralised system for collecting and organising key information (such as emergency contacts for students), which means that many of these responsibilities must be taken up at the department level. Reviewing these guidelines annually and integrating into safety and accessibility planning is essential.

There are several considerations that may be particularly relevant for integrating safety and accessibility planning.

- **New instructors/new sites:** Completion of risk assessments by new teachers or for new sites may be exceptionally challenging. Establishing mentoring/peer support for effective assessment, rather than relying on repeated use of existing risk assessments from previous teachers, ensures that new staff are effectively supported and risk assessments are completed thoroughly by the responsible person.

- **Communication with students:** Several aspects of safety, emergency preparedness and understanding of risks in field-based learning rely on student participation. Students may not be familiar with what they are agreeing to or what processes they are responsible for. In addition to clear communication, instructors can design preparation activities that engage students in

Planning meeting. Photo: Colourbox

understanding of emergency planning, safety and risk, and identification of how they can prepare for field-based learning. Several teachers often use case studies to help students identify and mitigate risk in scenarios related to upcoming field-based teaching.

- **People with disabilities in risk assessments**: Risk assessments are often done with the assumption of a 'typical or normal student'. Risks may be quite different for people with disabilities. For example, students with sensory disabilities (hearing, sight) may be more vulnerable during emergencies due to limited or inadequate information. Students with neurological conditions may experience significant variation in their physical and cognitive abilities depending on conditions. In assessing risk, it is important to consider how much variation we include in our representation of our students.
- **Violence/safety in the group**: Emergency planning can also consider how to address circumstances such as assault/sexual violence/harassment in field-based teaching. How will you support a student/colleague who may need urgent care? How will you address if a student/teacher is involved as a perpetrator? What follow-up will be needed for the group as a whole?

Emergency planning can be integrated into planning for accessibility – both in thinking fully about what is needed to ensure students are safe in the learning environment and engaging students as active contributors to make field-based teaching safer.

Conversation. Photo: Colourbox

Asking about health and disability

Many teachers struggle when asking for information from students about what they need to learn in relation to health and disability. Information about health and disability is understood, in Norway, to be private and thus inquiring must be done with care and consideration. There are some recommendations related to requesting information about health and disability in relation to learning that can be considered.

Communicate when sharing information about health and disability is mandatory (e.g., sjømannsattest). Students must understand how these processes work, including who has access to their information, and how it is used.

Within the teaching team, and in collaboration with department study advisors, establish how information about health and disability that is related to **safety** and **learning** will be requested, shared and used.

Safety: for students to be safe in the field, documenting and sharing some information about health and disability is necessary.

For example, staff will need to know about existing health concerns (e.g., epilepsy, diabetes, anaphylactic allergies) or disabilities (e.g., hearing impairments, neurological impairments) to establish processes that ensure students are safe (e.g., adding a medication check for some students, establishing consistent partners for activities, communicating with site staff about health/ disability needs for students).

Learning: for students to be able to learn in the field, sharing some information about health and disability will be necessary. Understanding students' needs enables staff to plan well for learning. For example, students with dyslexia may require teaching materials to be in specific fonts/formats.

Students who are breastfeeding may need a place to pump and store breastmilk. Students who use mobility aids (e.g., canes, crutches, leg braces) may require more specific information about terrain and distance.

Knowing what students need to learn can support teachers in assessing what is possible on a trip and support students with challenging decisions (e.g., should I use my knee brace which improves my mobility but is not compatible with my most waterproof clothing?)

«We get too little information from the administration about the students that we have with us.»
Staff

Yes, and often people talk a little about that it feels difficult to understand. What is it allowed for me to ask people about? Can I ask people? Do you have anxiety, psychological problems, diabetes? People often feel that it is not allowed to ask people about things that are personal or that they cannot ask students about this.»
Staff

Requesting information

Check!.
Illustration: Colourbox

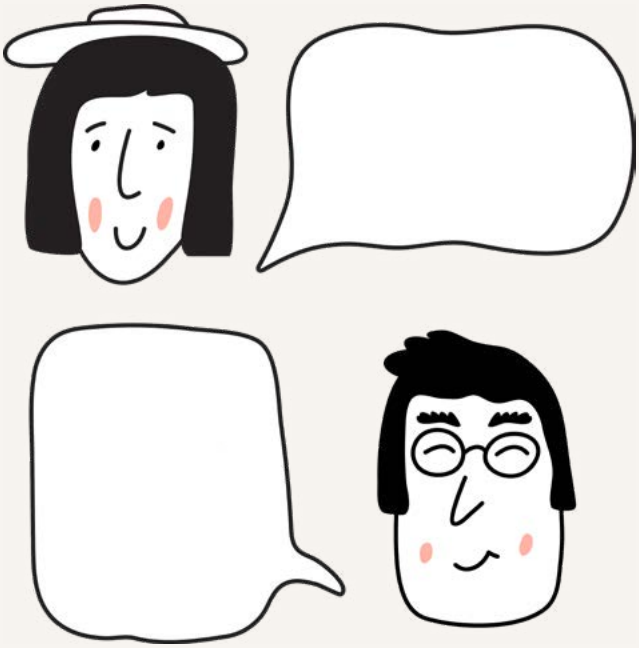
Information should be requested early enough to be able to use it for planning and preparation. Information learned at the last minute usually cannot be used to support accessibility as making changes can be impossible at this stage. Communicating to students about the importance of early information sharing is essential. Importantly, in situations where sharing of health/disability related information is not mandatory, it is useful to know that teachers can ask about health and disability *and* students can opt to answer (but may choose not to). How we ask, and for what purpose, can help to cultivate an inclusive and accessible learning environment where students feel they can speak about learning needs without risk of discrimination.

Questions to consider about requesting information:

- What information do study advisors have permission to provide? What do we already know about students' needs?
- What questions can we ask through a pre-trip survey to help understand what students need to be safe and able to learn on the trip?
    - e.g., we might need to ask about medication use because proximity to pharmacies and medical services is very distant from our site (thus forgotten medication could lead to an emergency)
    - e.g., we might need to ask about sleep needs if we know that students will need to share rooms, sleep in hammocks or tight bunk beds
    - e.g., we might need to ask about mental health concerns given the challenging components associated with the teaching (isolated location, length of trip, extensive group work, stressful work conditions)
- Can we schedule drop-in hours for students to come and discuss potential concerns?
    - For small groups, especially when field-based teaching that may be lengthy or have specifically challenging conditions, requiring short 1-on-1 conversations with all students, may be warranted.

Importantly, we will want to differentiate when information is being requested compared to when it is required. Students may be reluctant to share some information because stigma related to health and disability is

common. They may not be certain that sharing information with teachers or peers will be met with safety and support or with discrimination. We can help to mitigate stigma by speaking openly about our motivation to strengthen accessibility in our teaching and clearly communicating how and when shared information will be used.



Talk to the student. Illustration: Colourbox

Sharing information

Student and staff information related to health and disability should only be shared as needed. It may be necessary for all teachers to know about a health concern (e.g., students with anaphylactic bee allergy participating in field-based teaching in a botanical garden). In some situations, it may be sufficient for some staff to know (e.g., students living with alcohol addiction participating in a field-based teaching where use of alcohol is limited or restricted for everyone). As a guide, taking into consideration whether knowledge about health or disability should be shared can be tied to the central tasks of ensuring students' safety or facilitating learning.

Suitable caution should be taken to ensure student information is treated with care, including keeping digital information in password protected files and print information in locked or secure locations (e.g., teachers' backpacks or rooms). After field-teaching activities are completed and information is no longer needed, student information should be deleted or shredded. Occasionally, students may disclose information to one teacher and ask that it is not shared with others. At times, this may be appropriate as it is not pertinent to share this information to ensure safety and learning are possible. However, if you perceive there to be a significant risk that only one person has this information (e.g., if you become ill), further discussion must be undertaken with the student about this request. Study advisors and department leaders can be helpful advisees about how to address this type of challenge.

Using information

If we request information, we hold responsibility to use it to strengthen accessibility, to plan for safety and meaningful learning. This may include addressing specific barriers in our field-based teaching, planning together with the student and study advisors about necessary individual adjustments, or adjusting some aspects of our teaching planning to facilitate inclusion. It may also indicate that we have identified an inflexible and essential barrier in the teaching that must be discussed further with students, colleagues and study advisors. Active follow-up with students is essential. This may include:

Short communication by email. This may pertain to a need for short clarifications and information sharing.

- e.g., We read that you take medication daily for 'x'. We have added a medication check to our packing list check on our departure day.
- e.g., We read that you have a specific health concern (e.g., diabetes). You may wish to know that we keep additional emergency food including items like chocolate and sweets in our first aid kit. Additionally, we would like to meet briefly via Teams to discuss who on the trip should know about your health concern to ensure you are safe on the trip.

In person or digital meetings and written communication

- e.g., I read your email where you discussed your experiences with group work as a person with autism. I may be able to better support you in your group if we could meet to discuss your needs. Could you meet next week?
- e.g., I read in the pre-trip questionnaire that you are receiving gender-affirming care. The country where we will travel for our field activities has been identified as potentially risky for transgender and non-binary people. To ensure your safe participation in this field activity, we must meet to discuss several specifics related to travel. Here are three dates I can meet next week. We can invite another person to join us at the meeting to think and plan (e.g., HMS rep from our department, a friend/ advocate (for you)).
- e.g., I read in your pre-trip questionnaire that you have a phobia of insects. The location where we will travel for our field activities has many kinds of insects, at the location where we will stay and in several of the field sites we will work at. To ensure you will be able to participate in our activities, we must meet in advance to discuss what we typically encounter in the field and how you can best navigate this.

To guide our discussions, our requests for information and how we will use this information, it is helpful to remember that we very rarely need specific information about people's health conditions or disabilities. Instead, we need to know what they require to be safe and to be able to learn. Rather than knowing, for example, the details of someone's diagnosis, which does not equip us to support students, we need to better understand what they need to learn. As teachers, few of us have specialised knowledge about health and disability, but we are well equipped to support students with learning in our fields. This is our area of strength and competence that enables to us to support students.

When accessibility is difficult or impossible

In the planning process, it is likely that some needs may be difficult or impossible to meet. This may have to do with lack of planning/budgeting wherein departments do not anticipate ad hoc expenses related to accessibility. There may also be logistical barriers.

For example, we may be unable to find a private room for a student for whom this is necessary because very limited options are available regarding where to sleep (e.g., bunks on ships/field stations) or we may be visiting a site that has barriers which we cannot remove (e.g., a site that must be reached on foot that requires walking multiple kilometres, a historical site that may not be adapted for universal access). If we encounter a barrier that cannot be removed, we must

communicate this with students, and together with colleagues and department leaders, identify alternatives in the study programme. This entails department level planning about accessibility and field-based teaching. Our focus on planning for accessibility is to identify which barriers exist and can be removed or addressed. We can then be more certain about which barriers are essential, not simply done out of habit/convenience.

Pedometer on mobile phone in fieldwork where you have to walk long distances.
Course: Ancient Rome
Screenshot: Ellen Lien, UiB

Groupwork, leisure and alone time

Part of creating a safe learning environment includes planning for how to facilitate the social dimensions of learning. The amount of planning varies enormously depending on the length of a field-based learning activity, the relative isolation of the group (on a boat, compared to staying in a city), group size, how mentally demanding the field activities are, and the number of teachers involved.

Card game. Photo: Wikimedia

Leisure/social time

Students highly value the social aspect of field-based learning, *and* they can find navigating social settings complex. Many students want to participate in some social activities – this might include playing cards at night or drinking coffee with others on a break or participating in walking tours or cultural events in the city where field-based teaching takes place.

We cannot take responsibility for all social/leisure time available. Often, leisure time is used by teachers to plan/troubleshoot aspects of field-based teaching and making time for

their own needs. We can establish practices to help students navigate and enjoy social time.

> ***«It was fantastic that the teachers had prepared some games and quizzes in the evening. This made it less scary.»***
> ***Student***

Some possibilities include:

- **Solicit student facilitators**: Ask students for help with planning several social activities. You could offer a starter list of possible ideas: a nightly quiz, stretching/ running group, listening to music, knitting, watching a movie, visiting a local site (street or public art) or playing cards. Social activities will need to be practical for the setting and ideally allow for some variation in how to participate

- **Clear invitations:** it can be difficult to determine if one is 'included' in a plan. Encourage and use a clear method for invitation to participate and clearly convey if social activities are optional.

    - For example, an invitation to everyone for a quiz: our quiz tonight is open for everyone. We will be in teams and quizmasters organise the teams. Arrive at 20:00 to be added to a team.
    - For example, an invitation to participate in a knitting session: everyone is welcome and can join anytime. Chatting and knitting is great, but you can also join for some 'alone together time' (people are together for an activity, but don't need to talk).

Clear guidelines about alcohol: some field 'sites' restrict alcohol entirely, while at other sites it may be permitted to drink alcohol. Some sites may be in urban areas where students can go to local bars in their leisure time. For some, drinking is a relaxing social activity. For others, drinking is associated with addiction and violence. Many choose not to drink for religious, health or personal reasons. If alcohol is available and it may be a part of social activities, you can share recommendations for respectful and smart consumption. This can include discussing safety, what constitutes moderate drinking, drinking with colleagues and sexual harassment. Recommend to those involved in planning social activities to include activities that are not structured around drinking.

> ***«I didn't get to know the rest of the group. So it was, in a way, that were only in our own bubbles. Not even in the evenings, when we should be together, it was often just a chat. A little bit of small talk. So maybe some help with that part would have helped»***
> ***Student***

Alone time

While some students are eager for social time with their peers, others are exhausted from a full day of interacting with others. They may need sufficient alone time (while not asleep), to be capable of more interaction and learning. This may be particularly relevant for neurodivergent students who can expend more energy navigating social interactions, for second language speakers who are tired from working in an additional language, or for those with sensory impairments who may need time without use of assistive devices (hearing aids, cochlear implants). Some strategies for

Headphones can be used as a signal. Photo: Colourbox

facilitating alone time can include:

- **Identify alone time:** When can students be alone? What time of day and where will they be during that time (e.g., at the accommodation, waiting at an airport)?

- **Establish 'alone' signals for a group**: For some field-based teaching, being alone is impossible. Knowing this, we can establish a signal that can be used to indicate that you wish to be 'alone'. For example, perhaps wearing headphones, sitting on a certain bench on a boat, lying in your bunk, or sitting on the right side of the bus can indicate you need to be 'alone'. Establishing a good signal can help to differentiate people who want to be alone from those who are not included in a group (and may need a direct invitation to join).

Clear communication about alone time can help to ensure that a need for solitude is not interpreted as rudeness. Field-based teaching is often intensely group oriented – which can make it both challenging and wonderful!

Organising groups

As teachers, we can plan for several ways to support students in working in groups. For learning to be possible, we know that students must feel safe. Some students arrive to group activities with bad memories (being picked last, disagreements with group members). Neurodivergent students can struggle in groups, having trouble matching their work practices with group expectations or misinterpreting communications. Students who have families or chronic illnesses may have difficulty being available and be perceived as uncooperative. Students who are dealing with trauma may seem disengaged or express emotions in ways that are not in sync with what is happening. Groups can also be important sources of support, motivation and comradery enabling students to take on new challenges and think creatively.

It is useful to start by considering how groups are used in field-based teaching and how prepared students are for this work:

- **Use of groups:** When and how will groups be needed? Will students travel together or share accommodation? Will they be working in groups for projects or activities? Will they be in groups for preparation work?
- **Group size:** Are there structural factors that determine group organisation? (e.g., shift work, groups needed to operate equipment, safety considerations)
- **Establishing groups:** How long have students known each other? Will some students be new and others have established relationships?
- **Group work in your discipline:** What group work have students encountered in their programme of study? How is group work valued in our discipline?

Thinking through what groups are for can help

Students from Earth Science ready for field work in groups. Photo: Ellen Lien, UiB

to establish what must be communicated to students about group work. It can also help us to evaluate what group work requires facilitation and what can be entrusted to students to organise. Some students are highly independent and expect to self-organise (e.g., students in programmes of professional study). Other students may have very limited experience with groups and will need more active facilitation.

If groups are necessary for core activities, teachers can establish groups based on their knowledge of the sites, the discipline and the students. Many teachers frame group work as akin to future work in the discipline – which means our groups will be comprised of people we have not met and with whom our primary point of connection is our work. From that starting place, we learn to work together. To strengthen groups, teachers can:

- **Describe and explain group purpose and structure:** What are the groups for? How will they work together? What are they responsible for? How have they been organised and why?
- **Group size**: Group size should be decided based on tasks, with the goal of keeping groups small when possible. Very large groups face significant challenges with communication and organisation, resulting in sub-groups that may be difficult to integrate and manage.
- **Create opportunities for connection**: Groups ideally will meet and prepare for field activities in advance. Teachers can assist in scheduling time for them to meet (e.g., short in class meeting, during the 'test run' mini field activity) and defining early tasks for the group to start with.
- **Create a group contract**: Groups will need to discuss how to work together by discussing tasks they will complete and processes they will use. Contracts can include identifying responsibilities, communication methods, deadlines and how disagreements will be addressed. Groups can also determine at the outset some examples of circumstances that will indicate they need external help.

- **Teaching about group work**: Teaching how to work in groups may be foundational knowledge for the discipline. This can include helping groups to determine ways of working together which highlight members' strengths rather than where they may be lacking. Teaching about groups can include speaking about difference and power and noting who is typically allocated certain work. This allows for discussion about processes, not just the products of group work.

Communicating well about group work, establishing opportunities and processes for groups to work together, and teaching about group work can help to remove barriers group work can create.

> ***«...that there is an obvious leader in the fieldtrip...yes, one has responsibility for the disciplinary work, and the students are certainly by definition adults, but at the same time there is something about handling the psychosocial environment in the group that I think it is the teachers have responsibility for.»***
> ***Psychologist, Sammen***

Collaboration with colleagues: Discussion questions

Planning is at the heart of UDL. Through thoughtful consideration and investigation of possibilities, we can identify how to support many students. While we cannot anticipate every barrier, planning can help to address barriers and communicate limitations and identify possible alternatives.

Planning can also support teachers who are already very stretched in meeting the demands of their teaching. Through strategic planning, teachers can work to build up accessibility and inclusion practices incrementally. We begin with planning to identify where we can and will act.

- What will students learn? How often and when do students have opportunities to receive and use feedback?
- How can we organise so core needs are met? What possibilities exist and what cannot be arranged?
- What information do we need to request from students to enable us to plan a more accessible and inclusive course/trip/activity?
- Who is involved in planning? How do we work together (rather than having one person be responsible for accessibility)?
- What do we want to learn together about accessibility and inclusion in our discipline?
- How can we strengthen social aspects of learning in the field? How can we integrate students into this?
- What processes will we use for establishing groups and designing group work? Why are these relevant? What skills must students have to work effectively in groups?

On site

This section focuses on practices that strengthen accessibility while field-based teaching is underway. It focuses on clear communication, adapting teaching plans when needed, addressing group needs and supporting learning through feedback and assessment.

Top recommendations

1. **Daily communication**: Plan for morning briefings (including details about learning activities and site conditions (e.g., physical activity demands, toilet access, weather) and afternoon/evening debriefing (to discuss learning activities, resolve concerns, and plan the next day).

2. **Individual meeting time:** Set and share a time when students can speak to you in private if they have concerns. Remind students in daily communication meetings.

3. **Alternative plans:** What will students do if they are unable to fully participate in activities? Are there alternatives that may be less demanding (physically demanding, or time consuming).

4. **Check-ins:** If students work in different locations, arrange a check-in system (planned return and steps to take if they are delayed/do not return). Make sure you know their planned route, activities, phone numbers, and any specific concerns for students (e.g., medical or mental health issues). How check-ins are organised may vary depending on the sites used in field-teaching (wild/rural vs. urban sites; within Norway/internationally). In urban spaces, an end-of-day check-in via text message may be sufficient. Contrastingly, in isolated or wild spaces, more detailed descriptions of planned routes and return times may be needed to ensure safety.

5. **Supplies and first aid kits:** Review/restock all daily supplies and kits. Teachers can carry extra food and supplies (e.g., extra gloves, hand warmers, sunscreen, hats) to support students who may not have enough equipment or unexpectedly feel unwell. Students should also know about the equipment the teacher is carrying, and that it is available to them if needed. Students who carry specific medical supplies (e.g., Epi-pens, insulin) must also do daily checks of their supplies.

6. **Assessing learning:** Setting aside time to assess if learning activities are functioning well, and if students are meeting learning goals daily is key. This assessment of learning includes thinking about whether social activities, group work and other aspects of social and psychological safety are in place to support learning. Teachers should have a good system to check in with students about the learning outcomes on a regular basis. This system can be developed jointly with fellow teachers and students.

Typical barriers

- **Fatigue and physical barriers** (e.g., lack of sleep, strenuous or long periods of walking, carrying heavy equipment, long working days).

- **Weather** (e.g., too cold, hot, wet, dry, windy, sunny, etc.) Students will experience weather differently depending on their clothing, health conditions, body size, etc.
    - Extreme weather may also compromise or close sites, aggravate safety issues, or cause equipment failures leading to frustration, anger or worry for students and teachers.

- **Sensory barriers:** site conditions may make it difficult for students to see/hear resulting in missing crucial instructions or information.

- **Unmet or compromised physical needs**
    - Toilet access (especially for those who squat to pee, for people who are menstruating, for people with medical conditions).
    - Not eating and drinking (access to food, not eating/drinking to avoid needing a toilet).
    - Medical issues/illness (people forgetting to bring/take medication, forgetting to check their blood sugar, being more susceptible to injury on site or to illness, having migraines, being overwhelmed with the experiences, panic attacks).

- **Group dynamics:** During field-based teaching, even with good preparation, groups may struggle. They may be unable to resolve conflicts and may have difficulty completing their required work. Poor conditions (weather, fatigued members) can aggravate working relationships. Communications may break down, resulting in limited learning and potential for conflicts and misunderstanding.

- **External people/institutions/local community:** During field-based teaching, we may interact with many people (bus drivers, crew, tour guides, security staff, local experts, etc.) and institutions (museums, schools, police) who may not share the commitment to accessibility work and may act in ways that specifically create barriers (e.g., drivers who will not let students use toilets on buses). Importantly, cultural norms related to accessibility and inclusion will vary enormously from country to country. In some locations, some students may be at risk of violence or harassment (e.g., women, LGBQ, trans and non-binary students, students with mental health concerns).

On site: read more

Universal Design for Learning relies heavily on preparation and design work to strengthen accessibility. But field-based teaching has many elements that can be less predictable – weather can be unstable, public transport can be cancelled due to strikes, and staff and students can become ill. Good planning creates a firm foundation for accessible field-based teaching, but there will always be decisions and actions that happen during our teaching.

Plan for regular meetings! Photo: Colourbox

Routines

While teaching in the field, it can be helpful to have established routines to help mitigate much of the unpredictability of field-based teaching. We may be unable to control how well we sleep, or if teaching activities unfold as we planned. Some routines can help both teachers and students to communicate about and manage the unpredictability of field-based teaching.

> ***«There's a lot of people who are annoyed, they feel like they shouldn't have to do this and they're like you shouldn't have to be their mom. But it's also a gentle reminder for everyone. I forget things when I go to the field. I forgot my shoes one time, and I had to walk with just my regular running shoes. It happens.»***
> ***Staff member***

Some possibilities include:

At the start of each day, use **a daily opening routine.** This can include a physical meeting if everyone stays in the same location or a digital check-in if students stay in various locations. A daily opening routine can remind students of:

- The day's activities (including schedule, locations and activities)
- Safety considerations or practicalities
- Learning outcomes or activities

Through the day, it will be important to **provide scheduled breaks** to ensure students have time to eat/drink, use toilets, rest, organise learning materials or otherwise prepare to continue in their work. If delays have happened during the day, it can be tempting to skip breaks. This is a common challenge when we are walking long distances or taking buses to different locations. Students may arrive at locations at different times and to get 'back on schedule', it can seem logical to skip the breaks and continue. However, breaks are key for ensuring students are mentally and physically able to continue learning. Breaks also give teachers much needed time to pause, think and adapt plans depending on how the day is unfolding.

At the end of the day, have a clear **daily closing routine.** This can include a short communication or activity. This can be done physically or digitally (depending on where and how students are working). A closing routine can:

- Address questions or challenges that emerged
- Review key activities completed
- Collect feedback from students (through a short discussion or survey) with a focus on learning, challenges, group dynamics and well-being.

For lengthy field-based teaching activities, plan for a **half-way check-in**. This check in can support students' self-assessment of learning and allow for feedback on accessibility and inclusion before activities are completed. For

example, you could ask all students to do a 3-5 minute check-in where they come to speak with one of the teachers and share:

- What have they learned?
- What are they struggling to understand/ achieve?
- How are they coping? (sleep/energy level, mental/physical health, motivation/ capacity)

By asking all students to come to you, it ensures that everyone 'checks-in'. A check-in is not linked to when there are problems, but a key step in reflecting on learning. For students who may be unsure how to share that they are not doing well, a required check-in creates a time and space to do so. Similarly, students who are thriving may not think to come and speak with teachers (as it can be assumed that only problems warrant attention).

The teacher needs rest! Photo: Colourbox

Teachers need rest! Field-based teaching can be exceptionally demanding. Plan for **rest for the teaching team**. An important part of routines is ensuring that teachers have enough time to rest, and the ability to access support for addressing challenges. What do you need in your routine to ensure you get rest? Who are your support people while you are teaching (both on site, and at home)? Importantly, as noted in planning, part of building a good routine for yourself will include delegating some responsibilities to students (e.g., organizing some social activities) to ensure you have adequate time for rest, follow-up and planning.

Changing conditions

During our interviews for this project, we noticed that instructors spoke regularly about changing conditions in field-based teaching and shared strategies for how they have adapted teaching as a result. There were three common changes that emerged in the field:

Weather

Vestland's weather is challenging for field-based teaching – both in cities, on ships in the fjords, and in the mountains. Conditions can be challenging. Students can be cold, wet and miserable when the weather is exceptionally poor. In other locations, weather may be hot, risk of heat-related illnesses high, and sun exposure potentially dangerous. In these conditions, teachers may consider if field-based teaching can continue and adapt plans as needed. It may be that a shorter day visiting fewer sites is possible. Students may need to have extra food and warm drinks packed to cope with cold or may need designated areas to rest that are out of the sun, drink frequently and use strategies to stay cooler in hot climates. Importantly, communication may need to be focused on motivation, clearly outlining when work will start/end and identifying necessary activities for the day.

Students hiking in bad weather. Photo: Ellen Lien, UiB

Field-based teaching does take place in poor conditions – but we do not have to celebrate suffering or downplay risks associated with adverse weather conditions. Instead, we can focus on adapting when possible, preparing students as best we can, and sharing empathy for the difficulty of working in poor conditions.

Illness or injuries

For field-based teaching with larger groups, it is likely that one or more students will become ill on a trip. Although less common, injuries do occur. For both small injuries and common illnesses (colds, motion sickness, blisters, sunburns, headaches), it may be possible for students to remain in the field, albeit with adapted activities (perhaps with reduced activity/greater opportunity for rest, work indoors (if conditions are poor)). Part of the daily morning routine may include identifying alternative activities for students who may be too unwell to fully participate, but not so unwell that they can only rest (or must leave to seek medical care). If students work in groups, it is likely that groups with ill or injured members may need support to adapt their plans for the day.

More serious illnesses and injuries likely require medical assistance (and possibly use of emergency services). Importantly, initial debriefing with other students may be needed if one or more students leave the field due to an injury or serious illness. Their peers may be upset, fearful, or worried about continuing.

Careful discussion with teaching colleagues and students may be necessary to identify if and how teaching activities can continue.

Disruptions: strikes, closures, conflicts

Field-based teaching can be affected by social, political and community events and activities near research sites. Transport and labour strikes can result in closures and cancellations. Conflicts between local staff and universities can result in closure of sites and political activities such as boycotts and protests can impact field-based teaching. Teaching activities may need to be rescheduled, and good communication with students about changes will be necessary. Importantly, what appears to be a disruption may be a part of field-based teaching wherein students learn what it means to work in the field. In many disciplines, navigating and maintaining good relations with communities where teaching occurs is essential.

While teaching may need revisions, some disruptions may offer the development of specific disciplinary competencies that might otherwise only be addressed hypothetically. However, students might experience these kinds of disruptions very differently. For some, adapting to a different schedule may be mentally challenging. For others, political activities (protests, boycotts) may invoke past traumas or raise tensions between students. Teachers may need to draw on conflict management strategies and consider what kind of care and support students may need to be able to continue to learn in the field.

Post field-teaching

Throughout field-based teaching activities, there are likely several exciting experiences, challenging questions, or future possibilities that you have noted. After field-based teaching activities end, there are often key areas for follow-up that are valuable for strengthening accessibility.

> ***«To be able to get a little more, maybe just some information about how to integrate yourself back. A debrief. I think most people need that. I remember when we came back the previous time. It was very hard and we were a little half depressed, because one runs on adrenaline there, and everything is new, everything is fantastic and then coming back to your own daily like again, maybe we could have a meeting when we come back.»***
> ***Student***

Reflecting on learning: After an intensive learning experience, creating structured reflection on learning can be valuable for helping students to recall, integrate and consider relationships between what they have done during field-based learning and other aspects of their course and program work. Reflective activities can be done individually or in groups, in writing or through discussion.

What is most useful is to engage explicitly in reflection, to use clear prompts (e.g., questions to write responses to, group tasks to complete) to spur reflective thinking. Reflection may be particularly useful for when field-based teaching had significant challenges and students need time to think through the implications.

Revisiting assessments: Field-based teaching often includes assessment during and after the activities. For assessments happening after completed activities, it is valuable to return to assessment guidelines (to review requirements and expectations) and to revise assessments (as needed).

For example, if a group required particular data that they were unable to collect in the field, what revision and support will they need to complete their project? If a specific museum or site was to be visited, but it was not possible due to a labour strike, how should an individual proceed who planned to present on an exhibit at this site?

Conflict resolutions and group dynamics: Conflicts may have emerged during field-based teaching that were not able to be resolved. Upon return, there will be time and perhaps better conditions to try and resolve conflicts that may have emerged among students or groups.

Additionally, groups that have experienced challenges, conflicts, or absences/illness among group members may need active support to be able to effectively work together again. Revisiting group agreements may be necessary to devise effective ways of working together. The Conflict Chapter has additional strategies for resolving conflict in support of learning.

Feedback on accessibility: Teachers spend enormous amounts of time and effort to design inclusive and accessible field-based teaching activities. It is valuable to seek feedback from students (and peers) on how effective this work has been.

Using a post field-teaching survey or in-class feedback session can provide valuable insights regarding what students experienced. You may have clear goals you worked on for a recent field-based teaching activity (e.g., better communication about accommodation and transport, stronger group support) - seeking feedback on this work can be useful for future planning.

Collaboration with colleagues: Discussion questions

- Who is responsible for what each day?
- Any current issues with students, and what can/should we do about them? (e.g., group dynamics, illness, inability to use equipment?)
- Are learning outcomes being met, and if not, what can we adjust?
- Where will we work today? How will we work together today? What are the necessary outcomes for the day?
- Are there any students we should check in with more often? (e.g., students with medical issues, disabilities, neurodivergence, or who are just obviously unhappy/unwell)
    - What actions can we take to support them?
    - Has this changed since the beginning of the field-based teaching?
    - Who will do this, and how to do it in a way which does not seem intrusive?
- Any ideas or questions to note for our post-field teaching work? What should we remember to return to when we are back ‘on campus’?

Communication

Good communication is a key to safety, mastery and learning outcomes in field-based teaching. When the information is unclear or insufficient, uncertainty arises, which can create stress both before and during field-based teaching, diminishing the learning experience. Clear and continuous communication provides predictability and builds trust between educators and students.

Top recommendations

1. **Inform early and often, especially about all the practicalities** – even if everything is not yet in place.
2. **Practical details:** It is very important to provide clear information about all practical details (accommodation, time, place, equipment and transportation), as these are aspects of field-based teaching that students think about and discuss extensively among themselves.
3. **Learning outcomes, roles and expectations:** Be aware of the importance of clear learning outcomes, roles and the expectations associated with the field-based teaching.
4. **Contact person and emergency procedures:** Regarding the contact person, we are specifically referring to who should be contacted in given situations (for example, in relation to crisis or emergency situations). Regarding emergency procedures, these must be reviewed together with students well in advance, and preferably repeated several times.
5. **Updates on changes:** When changes occur during the field-based teaching, it must be communicated to the students as early as possible in the manner you have agreed upon (via the learning platform, email, SMS, etc.).
6. **Confirmation that everything is going according to plan:** It is important to tell students that everything is going as planned. You can easily do this during the daily debrief, or in another forum if you have agreed on this with your students.
7. **Evaluation:** It is by allowing everyone to participate in the evaluation of the field-based teaching that it can be continuously improved. Also make sure that there is a field for open feedback if you use an online form.
8. **Uncertainty:** Discuss with the students that travelling and learning in the field involves uncertainty, and that many unforeseen events can occur. Feel free to provide specific examples from previous field-based learning activities and courses.
9. **Let students know when there is no more news**: Long gaps between information updates can trigger uncertainty for quite a few students. For this group, even a short message of 'No changes since the last update' can make it easier to cope with the uncertainty.
10. **Use established communication channels for information:** and make them known to the students.
11. **Repeat practical info** in multiple formats (text, verbal).
12. **Have a plan for changes** – and communicate it clearly.
13. **Have a crisis management plan** – and communicate it clearly.

Typical barriers

Through interviews with students and educators, we have identified several challenges. Students experience insufficient information related to:

- **Unclear expectations regarding tasks and roles:** Make sure that this is clarified well in advance of field-based teaching activities.
- **Unclear communication in different channels:** Make sure students (and you) agree on where different types of information are communicated, and stick to this!
- **Uncertainty about practical details:**
  - accommodation
  - transport
  - food
  - equipment
  - finances
  - alone time
- **'Enough' information:** It is often difficult to know how much information is 'enough'. It may be a good idea to keep in mind that there will never be enough for some groups of students.
- **Time pressure between planning and follow-up:** When planning, it is important to make sure that you can actually follow up on what you have communicated you will follow up on.
- **Lack of clarity about what teachers can ask about disability or health.** There is some uncertainty regarding what is appropriate/allowed to ask a student. Generally, you can ask about what is relevant to know about a student's health or disability that you as a teacher need to know to plan for learning and safety, but of course, the student can choose not to answer.

«I see how that I need to provide more information. I also want to provide more information. But I also see that the generations have changed a bit.»
Staff member

«I thought it was fun to be surprised wherever you are going and what you are going to do. And that's one thing I learned that I'm probably the only one that likes that surprise.»
Staff member

Communication: read more

Good communication is a cornerstone of universally designed field-based teaching. When expectations, needs and responsibilities are clearly communicated and understood, both learning outcomes and participation improve for everyone. Universal design of communication is not just about accessible formats, but also about clear procedures, predictability and open channels for communication between and amongst students, teachers and study advisors.

Students have different needs and experiences, and an empathetic approach in communication will promote safety and trust.

Communication between educators and students

Predictability and clarity
Educators should communicate the framework for the field-based teaching early and clearly: learning outcomes, practical requirements, schedule, transportation, accommodation, workload, finances and the skills that are expected/required. This gives the students the opportunity to plan and, not least, to communicate their needs. Students have particularly expressed uncertainty and stress related to accommodation arrangements. For example, it is important to be clear about the types of beds available, not just the number of beds. Several students from our interviews spoke about having to share both a double bed and a double duvet with peers.

> ***«You have to go to the mountains, but do we really need to go to the highest one? You don't do anything at that mountain, because when we reached the top, it was only a hike! You could have seen much the same if you had gone for a walk in the nearby surrounding areas. They should not plan such hard hikes.»***
> ***Student***

Available information

The information should be shared in several different formats (written, verbal, visual) and stored in places where students can easily find it again. Make sure that any jargon is adapted to the students' academic level, and try to avoid unclear terms; explain what actually happens in the field and what the students are expected to do.

Open dialogue channels

There must be a low threshold for students to report their needs, concerns, or barriers, and it is especially important to emphasise that information about any adaptation needs is necessary, normal and welcome.

It is useful to establish regular points of contact, and what appears to be most suitable is to conduct a short debriefing every day, or at least on a regular basis. Field-based teaching often changes along the way, and regularly checking in with the students helps identify and address challenges before they potentially become critical and concerning. Small adjustments along the way can make a big difference to the learning environment.

Communication between educators

Shared understanding of work and responsibilities
When multiple educators are involved, it is crucial that everyone shares the same understanding of learning outcomes, assignments/tasks, risk assessments and adaptation procedures. Unclear division of responsibilities creates both stress and potential barriers for all parties.

Coordination and information flow
Make sure you have agreed in advance on how all relevant information about student needs, logistics and academic progress will be shared in a structured way. Minor misunderstandings in the field can have major consequences – especially for students who rely on adaptations in order to participate.

Common language for inclusion
Educators should agree on how to talk about accessibility, adaptation and expectations. This ensures that students do not receive different messages from different educators and helps create a cohesive and safe learning environment.

Communication between educators and study advisers

Deling av informasjon i Mitt UiB (Canvas)
Screenshot fra mitt.UiB.no

Early involvement of study advisers
Study advisers often hold important information about students' situations, faculty guidelines and previous adaptations provided for students in the same type of, or comparable, field work. The earlier advisers are involved, the better the field work can be planned in a more precise and holistic manner.

Clear routines for adaptation needs
There should be clear channels for how information about adaptation is shared between advisers and educators, while also ensuring that data protection is safeguarded. Clarify what can and cannot be communicated and how decisions are documented.

Joint problem-solving
Many adaptation-related issues require collaboration. Educators can contribute practical and subject-specific insight, while student advisers can assess which measures are most appropriate and justifiable, both academically and legally. Good collaboration ensures that solutions are found more quickly – and often before challenges arise.

Students are an important resource in the field work. Photo: UiB

Conflicts

Field-based learning can be intense and can heighten both collaboration and group tension. When people work closely together over time, often under demanding physical and social conditions, conflicts can arise. Universal design of field-based teaching involves preventing conflicts where possible and, when they arise, managing them in a way that is inclusive, fair and predictable for everyone involved.

> ***«I think they should be aware of many things, at the beginning, before attending their first field trip, that this is a trip, a fun trip. NO! This is a field trip, a working trip and these are not your friends, these are your colleagues. So they should be prepared to be with people they are not usually with.»***
> ***Student***

Top recommendations

1. **Develop clear frameworks before field-based teaching begins**: Communicate expectations regarding roles, responsibilities, collaboration, communication and behaviour for both students and teachers.
2. **Make students aware of possible conflict situations** by letting them make a list of possible situations in which conflicts can arise and engage students in identifying possibilities for how to solve them.
3. **Develop common rules together with the students**: Establish norms for collaboration, respect and conflict resolution together with the students. Develop a list of possible conflicts and strategies for resolution. Use the students' list and their own proposed solutions, to support conflict resolution during field-based teaching.
4. **Establish predictable routines for notification and follow-up**: Students need to know who they can contact, how to do so and what will happen next when conflicts arise.
5. **Have a low threshold for raising questions about challenges**: Create opportunities for reporting issues early, including 'small' problems.
6. **Prepare for adaptation for different students' needs**: Stress, health, language, culture and past experiences can affect how students understand and experience conflict.
7. **Discuss and clarify roles among teachers**: Unclear responsibilities increase the risk of conflicts in the teaching team.
8. **Keep and use strategies for documentation:** Agree on what should be documented, when and by whom, if conflicts arise.

Typical barriers

- **Unclear expectations** regarding roles, responsibilities, workload, learning outcomes and academic requirements.
- **Insufficient advance information** about the practical, social and academic frameworks for field-based learning.
- **Time pressure and high work intensity** combined with few breaks and little private space.
- **Lack of adaptation for individual needs**, such as health, functional variation, language or experience.
- **Unclear decision-making lines**: Who decides what – and when?
- **Unspoken norms and assumptions** about what is 'normal' or 'appropriate' behaviour during field-based learning.
- **Communication challenges**, including language, culture and different ways of giving and receiving feedback.
- **Mixing of professional and private roles**, especially in social settings.
- **Lack of routines** for addressing issues early, before they escalate.

Conflicts: read more

Interviews with both students and educators show that conflicts during field-based teaching are often perceived as more burdensome/ stressful than in regular campus-based teaching. This is related to several factors:

- Field-based teaching often takes place over extended periods of time, frequently without scheduled breaks.
- Participants are closely connected both socially and academically/professionally.
- Opportunities to take a step back are limited, in particular when students and teachers must sleep, eat and spend all leisure time in limited locations (e.g. on a ship, at a remote accommodation)
- Informal situations (meals, travel, overnight stays) blur the line between student life and private life.

Here, Universal Design for Learning cannot promise to eliminate conflict – it is neither possible nor desirable – but about ensuring structures that allow conflicts to be managed without individuals systematically being disadvantaged.

In the interviews for this project, we frequently heard from students and employees that conflicts often escalate when they are not addressed at an early stage, and when students experience uncertainty about support, rights and consequences

Conflict between students

Conflicts between students often arise in work situations that require collaboration, division of tasks or joint responsibility for results. Typical triggering factors that emerge from the interviews are:

- Different work capacity or work style
- Different expectations regarding effort and responsibility
- Communication challenges (language, culture, personality)

- Different needs in relation to breaks, structure or flexibility

Educators should:

- Clarify group organisation and the possibility of changes before field-based teaching begins
- Talk explicitly about collaboration, do not take for granted that students know how to work collaboratively
- Introduce structured reflection or check-in points along the way
- Have alternative solutions for field-based learning if collaboration breaks down

Several students describe that they were reluctant to bring up conflicts for fear of being perceived as 'difficult' or of disrupting the group dynamics. Designing for more accessible field-based teaching means that we normalise that conflicts can and do occur and that collaboration can be demanding. Normalising conflict and acknowledging the challenge of collaboration can shift our focus to how to strengthen students' ability to work collaboratively and to take an and active approach to conflict resolution. Learning to resolve conflicts is a skill students can learn and will need feedback to develop.

Conflict between educators and students

The power dynamic between educators and students often becomes more apparent in the field than on campus. Educators assess, supervise and often have responsibility for both academic progress and safety. Students, however, are dependent on educators' assessments and decisions.

The interviews show that conflicts in this relationship are often about:

- Experiences of unfair or unequal treatment
- Lack of understanding regarding individual needs or boundaries
- Unclear expectations in relation to performance, availability or participation

To reduce the risk of conflict, educators should:

- Communicate clearly and in writing about requirements and the basis for assessment
- Distinguish as clearly as possible between assessment and care/adaptation
- Encourage dialogue while also setting professional boundaries
- Have a clear plan for how complaints or disagreements are managed

Students particularly emphasise the importance of being taken seriously at an early stage, before frustration builds up. When conflicts first escalate, it often feels unsafe to stand alone against an academic authority figure (e.g. course instructor, teaching assistant). Conflicts that are not resolved or addressed can escalate over time and lead to severe distress, and not least to a need for help in the form of treatment from healthcare professionals.

Conflict between employees

Field-based teaching is often carried out by teams of educators and technical staff, and frequently in collaboration with external partners. Conflicts between employees can be about:

- Unclear division of roles and responsibilities
- Disagreement about professional/ academic priorities or pedagogical choices
- Differing views on how best to facilitate

achieving universal design to the greatest extent possible.

These types of conflicts have indirect, but often significant, consequences for students. To prevent and manage conflicts between employees, the institution and the academic community should:

- Clarify roles, responsibilities and decision-making authority in advance
- Have a common understanding of universal design as a pedagogical and organisational responsibility
- Establish internal routines for managing disagreements in the field

When employees are in conflict, students report increased uncertainty and reduced sense of security. Therefore, universal design also involves taking organisational responsibility for the collaborative climate among employees.

Conflicts in field-based teaching are complex and often multifaceted. A universally designed field-based teaching activity or experience is not characterised by an absence of conflict, but by clear structures, predictability and an inclusive – and importantly, well-established – practice for managing disagreements. This benefits both students and educators – and strengthens the quality of field-based learning.

More about the project

This guidebook was developed as part of a project focused on Universal Design for Learning in field-based teaching. This project has been funded by Directorate for Higher Education and Skills (HK-DIR). The central goal of the project and this guidebook is to strengthen and support teachers in designing and leading field-based teaching to improve accessibility for students. This project works from three key principles to engage this work:

1. Teachers need support and resources: we approach this work on Universal Design for Learning with a focus on how to support and equip teachers to do their work well, while acknowledging that teachers encounter many challenges in planning for and leading field-based teaching.
2. Field-based teaching is key to disciplinary learning: we approach this guidebook and the project with the goal of strengthening discipline-specific teaching. We want to strengthen accessibility in field teaching given its key role in the disciplines.
3. The 'field' has barriers, some of which may be necessary. Our goal is to consider which barriers can be removed or diminished and what teaching practices can strengthen accessibility for students. We acknowledge that some barriers may be essential (for safety) or costly/complex to mitigate.

Taking these three principles into the project, we invite all teachers and students to participate in strengthening accessibility in field-based teaching – this work requires creativity, commitment and collaboration.

Why focus specifically on field-based teaching and learning?

There are many resources available focused on Universal Design for Learning in the classroom – but extremely limited resources focused on teaching in the field. This gap in resources and support means that teachers are often left on their own to learn about and employ UDL principles. Although there are many other 'out of classroom' types of teaching undertaken in higher education (e.g., clinical or professional placements) - there are many specific aspects of field-based teaching that warrant specific attention (rather than combining it with all other non-classroom teaching).

What is 'field-based teaching'?

There are many terms to describe teaching in the disciplines in environments outside of university classrooms (both physical and digital). Some disciplines describe this teaching as field courses or field excursions. Others might describe this as context immersion or learning on site or with communities.

Many people have words they dislike seeing in use, such as cruises or trips, which suggest holidays rather than work or study. Our focus in this project is on activities that require students and teachers to go together to a site in order to make specific kinds of learning possible. This may be short in duration (a couple of hours) or lengthy (weeks or months). It may be in urban, rural, or wild/undeveloped places. Teaching may occur indoors in commercial, private or public spaces, outdoors in fields, forests, farms or mountains, or on vessels such as ships. Field-based teaching may be co-facilitated by experts proximal to or at the site (e.g., museum staff, Indigenous leaders, local guides). We use field-based teaching to emphasise that the activities are focused on teaching and learning (rather than research or commercial activities), and they are dependent on or based on specific locations.

How was the project undertaken?

The development of this project included several key processes to inform the creation of the guidebook. These processes include:

- Interviews with students, including students with disabilities, about experiences of field-based learning
- Interviews with teachers who design and lead field-based teaching
- Interviews with professional staff who support students with disabilities
- Review of scholarly literature on Universal Design for Learning and barriers to participation in field-based teaching
- Consultation and dialogue with Universal Design for Learning experts

To recruit participants for the project, we issued a broad invitation among staff at faculties and departments where we knew that field-based teaching is a key part of teaching activities. In addition, we made direct contact with educators we had already established relationships with through our work in the Programme for University Pedagogy (UPED). With regard to students, we asked student advisers at the same faculties and departments to help pass the invitation along. We supplemented this with an open invitation distributed via screens around the campuses, with a QR code linking to the registration form.

In total, we conducted interviews with 25 educators, 17 students and two psychology specialists. The interviews were conducted in the participants' preferred language, Norwegian or English. We used a semi-structured interview guide, and the

participants could choose whether they wanted individual or group interviews. This option was also made available in the registration form, where participants could tick "Wish to be interviewed individually". Each interview lasted approximately 75 minutes.

All interviews were audio-recorded after written consent was obtained from the participants, and the recordings were subsequently transcribed, mainly using Autotekst. The transcripts were reviewed to ensure quality, including anonymisation of personal data and removal of identifying details.

The analysis followed a thematic approach. Firstly, we read through the material in its entirety to form an overall impression. We then conducted open, inductive coding, identifying and labelling meaningful elements relevant to our project. The codes were then compiled and sorted into preliminary themes: challenges, the planning phase, information, conflict, good advice and professionalism.

Interviews were conducted to strengthen the project in three specific ways.

1. To gain a broad understanding of field-based teaching and typical barriers encountered in the field. From students, academic and professional staff, and psychologists, we were able to gather differing perspectives on what barriers impact students' learning.
2. To identify inclusive teaching practices in use by educators. From all interviews, we learned about useful practices or ideas that can help to strengthen inclusion and accessibility. Moreover, we learned how instructors have learned from others – both what kind of approaches they found helpful and what motivated them to adopt and change how they teach.
1. To understand what instructors struggle with regarding field-based teaching and accessibility in order to identify and prioritise focus areas..

Universal Design for Learning & individual adaptations

This guidebook is for teachers who design and lead field-based teaching. It focuses on practices and approaches relevant to all students. It is not intended as a resource for how to provide individual adaptations or facilitation for students with disabilities. The purpose of Universal Design for Learning is to improve accessibility for all students and to implement practices that reduce barriers (which may, in turn, reduce the need for some types of individual adaptations). We advocate for use of UDL principles in field-based teaching *and* provision of resources and expertise about individual adaptations which may be necessary for some students.

What is universal design?

Core values, legal basis and background

The United Nations Convention on the Rights of Persons with Disabilities has the following definition of universal design:

"Universal design" means the design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design" (Konvensjon om rettighetene til personer med nedsatt funksjonsevne, 2006).

The requirements for universal design are laid down in Section 3 of the Equality and Anti-Discrimination Act, chapter 3 (Lov om

likestilling og forbud mot diskriminering, 2017) and in Section 10 of the Act relating to Universities and University Colleges (Lov om universiteter og høyskoler, 2024)

Universal design of the learning environment means universal design of:

- the physical learning environment
- the digital learning environment
- the organisational learning environment
- the educational learning environment
- the psychosocial learning environment

In addition, we adhere to the Regulation for universal design of information and communication technology (ICT) solutions. The purpose of this regulation is described in Section 1 as follows:

"The purpose of the Regulation is to ensure the universal design of information and communication technology solutions in order to promote equal participation in society, reduce and prevent new digital barriers, and prevent discrimination, without imposing a disproportionate burden on the undertaking" (Forskrift om universell utforming av informasjons- og kommunikasjonsteknologiske (IKT)-løsninger, 2023).

Furthermore, we are obligated to comply with the requirements of the EU's WAD (Web Accessibility Directive), which in practice means that we must produce accessibility statements and comply with at least 48 of the 72 requirements in WCAG 2.1, Web Content Accessibility Guidelines. WCAG is a technical standard that you can read more about at the Norwegian Authority for Universal Design of ICT (uutilsynet.no).

According to the 2024 Eurostudent survey, 21% of Norwegian students report that they have a permanent or temporary impairment and/or learning disability that limits their studies. This highlights that importance of working to strengthen universal design so that most students have good learning outcomes, and to prevent drop-out (Statitisk sentralbyrå, 2024)..

Research on inclusion and accessibility in field-based teaching

This project and the development of the guidebook are intended to strengthen accessibility in field-based teaching through support to teachers. Although the field of research and the development of resources in this area is small, our goal is to think critically and practically about which practices foster inclusion and access in field-based teaching.

Barriers to learning in field-based teaching

Field-based teaching is understood to be an integral part of learning in many disciplines, providing the opportunity to practice and develop disciplinary skills and promote theoretical knowledge. Moreover, field-based teaching is often foundational in shaping disciplinary identities.

However, despite its clear importance to the disciplines, it is also identified as exclusive and inaccessible, in particular for people with disabilities, women, fat or larger-sized people, Black, Indigenous and people of colour (BIPOC), and LGBTQ+ people (Heimann & Johansson, 2024; John & Khan, 2018; Mattheis et al, 2022; Philips & Gilchrist, 2012; Rowan et al., 2022; Stokes et al., 2019; Tolstrup et al., 2024)).

Furthermore, the invisibility of disabled people among students and scholars in

many disciplines is highlighted as a barrier to strengthening access in field-based teaching (Castro & Aitchison, 2024; Heath-Stout, 2023). It is hardly surprising that many teachers then struggle to think about accessibility given the pervasive belief that people with disabilities are absent from their discipline, program, or course.

What much of this research challenges us to consider is not just what barriers might exist in certain locations or through a specific practice, but how attitudinal barriers and ableism normalise exclusion. If we want to design inclusively and accessibly for field teaching, we must also engage in critical reflection about exclusion and inaccessibility in our disciplines.

Inclusive and accessible field teaching

Teachers, researchers and students advocate for inclusion work in field-based teaching (Feig et al, 2019, Marshall et al, 2025; Race et al, 2021; Rodari & Miesen, 2022a, 2022b). There exist a growing number of resources, guides, blog posts, checklists and materials designed to rethink what has been normative practice in field-based teaching and offer teachers tools for making change (e.g., Greene et al, 2020; Rodari & Miesen, 2022a, 2022b, Rowan et al, 2022, Marshall et al., 2025).

This work has included attention to developing more inclusive approaches to existing field sites, rethinking field site selection, and the development of virtual tools to support field teaching. Use of virtual tools as an alternative to participation in field-based teaching for students with disabilities has historically been critiqued for its poor quality and lack of experiential elements (Carabajal et al, 2017). However, recent development of virtual field guides and experiences have worked to actively address the need for experiential, collaborative learning in virtual spaces (Bond & Cawood, 2020; Pugsley et al, 2021).

The urgency of this work was accelerated by the Covid-19 pandemic when the higher education sector struggled to adapt all teaching practices to virtual settings, but its importance continues as academic communities weigh the environmental costs of travel for field-based teaching (Pugsley et al, 2024).

Research into practice

Reading and learning about exclusion in field-based teaching, as well as investigations into how to revise and rethink instructional practices to strengthen access, can help to provide a foundational understanding for how field-based teaching has been organised.

This research highlights how field-based teaching has been premised on the idea of a 'normal' student and emphasises that this neglects who studies and teaches in our disciplines. This guidebook offers an invitation to teachers to orientate themselves not towards one idealised version of a student, but to plan for the many students who enter field-based courses and activities.

Universal Design for Learning principles focus on practices that support all students and acknowledge that differences among our students are important and cause for celebration. It is good news that more students wish to study and contribute to our disciplines.

Conclusion

Field-based teaching offers the possibility for rich and challenging learning experiences. It can also be designed and led in ways that strengthen accessibility, ensuring greater access and fewer barriers to learning for all students. Importantly, strengthening accessibility is a process – it means working actively to identify and remove barriers.

We invite all teachers at UiB to think critically about what actions they can take to contribute to more accessible teaching. It is our collective work, together with students, that can be most powerful.

After reading this resource guide, there may be many possible ideas and actions you have identified as possible ways in which you can contribute to accessibility. Accessibility work is incremental and process oriented – it is not always possible to tackle everything at once. Knowing this, we invite you to:

- **Identify your top 3-5 focus areas** or actions that you intend to work on for your next field-based teaching activity.
- **Reach out to a colleague** with whom you can critically discuss accessibility in your field-based teaching.
- **Share this resource** with a department leader or colleague. Let them know what you found useful in the guidebook.

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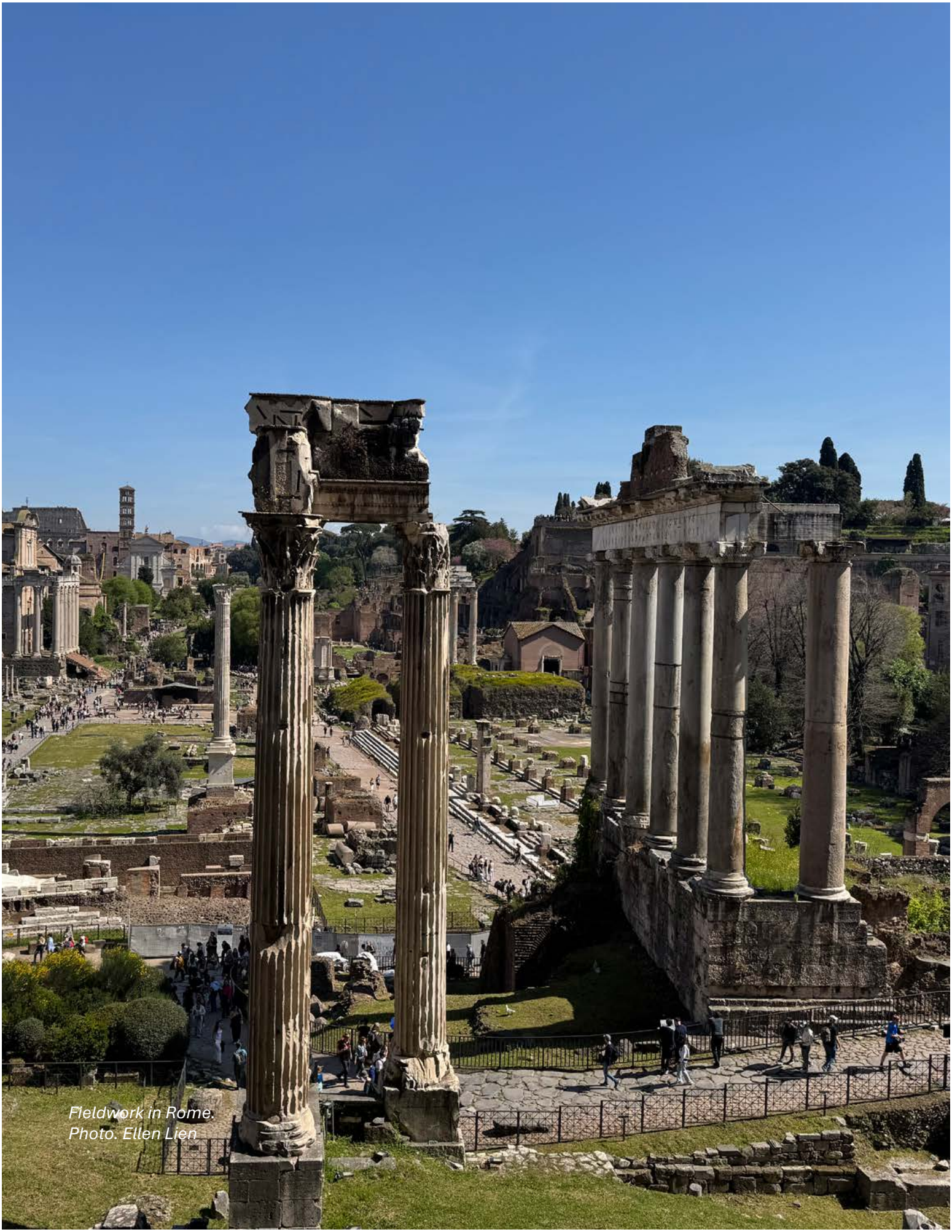
My Own Top Ten List

Notes



Fieldwork in Rome.
Photo. Ellen Lien

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